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NOTE BY THE SECRETARY-GENERAL

The Secretary-General has the honour to transmit to the Security Council a report submitted by the Executive Chairman of the Special Commission established by the Secretary-General pursuant to paragraph 9 (b) (i) of Security Council resolution 687 (1991).

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Annex

Report of the Secretary-General on the status of the implementation of the Special Commission's plan for the ongoing monitoring and verification of Iraq's compliance with relevant parts of section C of Security Council resolution 687 (1991)

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I. INTRODUCTION

1. The present report is the seventh submitted pursuant to paragraph 8 of Security Council resolution 715 (1991) of 11 October 1991, by which the Council requested the Secretary-General to submit a report to the Security Council every six months on the implementation of the Special Commission's Plan for ongoing monitoring and verification of Iraq's compliance with relevant parts of section C of Security Council resolution 687 (1991). It updates the information contained in the first six reports (S/23801, S/24661, S/25620, S/26684, S/1994/489 and S/1994/1138 and Corr.1).

2. Further information concerning developments relating to the implementation of the plan is contained in the report to the Security Council of 15 December 1994 (S/1994/1422 and Add.1), the seventh report provided in accordance with paragraph 3 of resolution 699 (1991), the addendum to which covers in detail the array of ongoing monitoring and verification activities undertaken by the Commission in the period from June to December 1994.

II. CONCEPT OF OPERATIONS

3. The basic elements of the ongoing monitoring and verification system are regular inspections of relevant facilities, inventories of dual-purpose items 1/ and accounting for all inventoried items until they are consumed, disposed of or no longer operable. The inspections and the establishment and maintenance of accurate inventories will be underpinned by a full array of interlocking activities: aerial surveillance with a variety of sensors, remote sensors, tags and seals, a variety of detection technologies, information obtained from other sources and, when sanctions on the dual-purpose items are lifted, notifications under the export/import control mechanism. No one of these elements on its own would suffice to provide confidence in the system, but together they should constitute the most comprehensive international monitoring system ever established in the sphere of arms control. Confidence in its effectiveness will rely, inter alia, on the following:

(a) Possession by the Commission of a full picture of Iraq's past programmes and a full accounting of the facilities, equipment, items and materials associated with those past programmes, in conjunction with full knowledge of the disposition of dual-purpose items currently available to Iraq, the technologies acquired by Iraq in pursuing the past programmes, and the supplier networks it established to acquire those elements of the programmes that it could not acquire indigenously. This information provides the baseline data from which ongoing monitoring and verification proceeds;

Knowledge of the level of technology attained by Iraq, of the production and acquisition methods it used and of the materials and equipment it had available are all key to designing a system of monitoring that addresses issues of concern and focuses monitoring effort where it would be most effective and efficient. For example, within Iraq, the system should focus more of its efforts on those technologies and production methods that Iraq is known to have mastered than on technologies and methods that Iraq is known not to have

mastered, whereas, for the export/import monitoring regime, the converse would be true, with effort focusing on those items that Iraq would have to import in order to reactivate a proscribed weapons programme. Clearly, knowing where to focus effort requires knowledge of what Iraq achieved in its past programmes;

Similarly, knowledge of the procurement methods and routes used by Iraq for its past programmes is key to the design of an effective and efficient export/import monitoring regime. This system should be designed to be effective against the procurement routes and methods that Iraq is known to have used in the past. Testing whether it is, is predicated on knowing those routes and methods;

Full accounting for the materials, items and equipment associated with the past programmes is directly related to what assets should be monitored under the system. Dual-purpose materials, items and equipment from the past programmes must be monitored, along with other dual-purpose capabilities available to Iraq. Uncertainties relating to the accuracy or completeness of this accounting will consequently lead to uncertainties as to whether the ongoing monitoring and verification system is indeed monitoring all the materials, items and equipment which should be monitored;

Under Security Council resolutions 687, 707 and 715 (1991), Iraq is obliged to provide the above information, which the Commission then verifies through its inspection and analysis activities. Iraq is required to update its declarations on its dual-purpose activities and capabilities every six months;

(b) Completion of comprehensive monitoring and verification protocols for each site at which monitoring will be conducted as a consequence of the dual-purpose items present or activities undertaken there. These protocols are the product of the baseline inspection process, i.e., inspections for the purposes of identifying all dual-purpose capabilities requiring monitoring, tagging and inventorying, sensor installation and protocol-building as necessary. They collate all the information required for future ongoing monitoring and verification of, and contain recommendations as to the conduct of such monitoring at, the specified site;

(c) Successful testing of the system of ongoing monitoring and verification in order to:

- Establish a clear understanding and practice of how the elements of the system, including the actions required of Iraq, should operate;

- Evaluate the effectiveness of its elements, both individually and as a whole;

(d) Continuing reassessment of the operation of the system of ongoing monitoring and verification in order to make adjustments necessary in the light of Iraq's industrial development and of any further information which becomes available on Iraq's past programmes. Because of the scale of those past programmes, the damage caused during the Gulf war and Iraq's own actions in allegedly destroying material evidence, in particular documentation, elements could remain unclear for a long time. While these elements, except where

otherwise indicated in the present report, are not such as to call into question the effectiveness and comprehensive nature of the monitoring system, the Commission will continue to seek out the information to clear them up. The entire process of verification of Iraq's declarations has been rendered both difficult and prolonged as a result of Iraq's refusal or inability to produce the documentation relating to its past programmes and Iraq's providing the Commission with frequently changing accounts of certain elements of its programmes. This has required the Commission to undertake more intensive investigations than would otherwise have been necessary. It has also had to seek information from other Governments of former suppliers to Iraq's programmes. This has consumed considerable periods of time. This procedure is still ongoing and will be vigorously pursued by the Commission. The full responsibility for the delays lies with Iraq. In addition to unclear elements of the nature referred to above, new information may become available to the Commission requiring investigation in the future. Iraq clearly understands this to be the case and the Deputy Prime Minister has on several occasions provided explicit assurances that Iraq will in no way hinder or interfere with such investigations.

While the system is premised on the provision by Iraq of accurate and complete declarations of its dual-purpose activities and capabilities and cannot be operated at its most effective and least intrusive without such full declarations, it has also been designed to be robust. Experience has shown that, even when initially presented with inadequate declarations, the Commission has been able, through the deployment of its various resources and the exercise of its inspection rights, to elicit the information required for the system to be established. The Commission recognizes that it has received full cooperation from Iraq in setting up and now in operating the monitoring system. It has also received assurances from Iraq, at the highest levels, that this cooperation will continue as the Security Council takes decisions in respect of easing or lifting sanctions and the oil embargo. However, should Iraq seek systematically at any time in the future to block the work of the Commission by, for example, preventing access to sites, the Commission would not be able to provide the Security Council with the assurances it seeks concerning Iraq's compliance with the terms of paragraph 10 of resolution 687 (1991). If such a case were to arise, the Commission would immediately inform the Council.

4. Once the sanctions imposed on Iraq under resolution 661 (1990) are eased or lifted, in accordance with paragraph 21 of resolution 687 (1991), to the extent that the export to Iraq of dual-purpose items is again permitted, a further essential element of the overall monitoring of Iraq's dual-purpose capabilities will be the export/import mechanism envisaged under paragraph 7 of resolution 715 (1991).

III. ACTIONS TO IMPLEMENT THE PLAN

A. Ongoing monitoring and verification operations

1. Missile activities

Summary

5. The Commission has essentially completed the accounting of facilities, equipment and materials used in the past proscribed missile programmes of Iraq. The Commission must complete its verification of certain elements of Iraq's account to ensure that all items subject to ongoing monitoring and verification are indeed included in the monitoring programme. The Commission is still waiting for responses to requests for information from a number of countries from which Iraq acquired or sought to acquire items for proscribed purposes about those transactions. In most cases, the remaining outstanding issues do not involve the receipt by Iraq of prohibited items, but deal with the technological level attained during, and the intended direction of, Iraq's past missile activities. Consequently, their resolution is required to ensure the right focus of ongoing monitoring and verification efforts.

6. The Commission completed the baseline survey of Iraq's permitted missile and related dual-purpose capabilities in May 1994. Installation of sensors and tags for monitored missiles and production equipment and related dual-purpose items was completed in July 1994 and the resident missile monitoring team began its monitoring activities in August 1994. Since then, the Commission has established a viable mechanism for monitoring Iraq's design, testing and production of permitted missile systems and related dual-purpose items. Iraq has provided support to ensure the proper operation of the monitoring system. The missile monitoring is now operational.

Past programmes

7. The lack of precision in the initial information provided by Iraq on its past ballistic missile programmes and the alleged destruction of documents by Iraq in late 1991 have made obtaining a complete understanding of Iraq's past ballistic missile programmes extremely difficult. The Commission has exerted considerable efforts to verify the information provided in Iraq's "Full, final and comprehensive report on ballistic missile activity", received in 1992. However, parts of the information provided have proved confusing, misleading or inaccurate. The Commission, therefore, embarked on an effort to seek corroborating information from a variety of sources to provide the verification required by the Security Council. Many of the details of those programmes have been elucidated. However, several issues remain to be resolved. These issues do not, in general, involve the delivery to or possession by Iraq of prohibited items, but bear directly on the technology level attained by Iraq. The Commission's understanding of this is important for the design and operation of the monitoring system.

8. Iraq's ballistic missile programme was initially centred around the single-stage, liquid-engine 8K14 (SCUD B) missile, for which it first received missiles and mobile launchers, together with associated support equipment, starting in

1974. Iraq has stated that in 1987 it started a programme to extend the range of these missiles and to reverse-engineer the system. In total, Iraq imported 819 such missiles and 11 mobile launchers for them. In addition, it produced indigenously 8 mobile launchers and constructed or was in the process of constructing 60 fixed launch sites for these missiles. The Commission has supervised or verified the destruction, and accounted for the expenditure, of the above assets.

9. The Commission has received numerous reports of the importation by Iraq of SCUD systems from countries other than the supplier of the 819 missiles described above. No evidence has been found of such imports. The Commission assesses that no additional missiles of this type or support equipment were indeed supplied to Iraq.

10. In its efforts to extend the range of the imported SCUD B missiles, Iraq used simple techniques which did not add significantly to its missile technology base. However, its reverse-engineering efforts included the acquisition of sophisticated production machinery and technology as well as the acquisition from various suppliers of components for missile systems. In particular, Iraq gained expertise in missile propulsion systems and their propellants, guidance and control and airframe production technologies, and acquired the hardware for high-precision machining. The above notwithstanding, Iraq was not successful in its efforts to acquire an indigenous capability to produce indigenously entire missile systems through its reverse-engineering efforts.

11. Beginning in 1985, Iraq started a cooperative effort with other countries to develop a high-technology, two-stage missile system designed for a range of around 1,000 km, called the BADR 2000 in Iraq. In this effort, Iraq constructed sophisticated production facilities and imported high-technology production equipment for the fabrication of the first solid-propellant stage of this system. The Commission assesses, however, that no complete BADR 2000 missiles were produced by Iraq. The Commission has supervised and verified the destruction of all known items, production equipment and infrastructure directly associated with that programme. The Commission currently believes that Iraq did not acquire any technology or equipment for the production of any other aspects or components of that system, e.g., guidance and control and launchers.

12. The Commission believes that it has a broad understanding of the achievements of Iraq's past missile programmes and of the level of technological development of Iraq in this area. It further believes that it has accounted for the majority of the materials, items and equipment associated with these past programmes. Investigations into the disposition of some remaining items, particularly related to the former missile reverse-engineering project, are continuing. The Commission believes it has been able to design a reasonable monitoring system based on this level of technology and that all the physical assets that should be monitored are indeed being monitored.

13. However, there are still aspects of Iraq's past programmes, regarding the direction of its research and development efforts, that require further clarification. The Commission has, over the past six months, requested and received information on Iraq's past activities from many supporting nations. The information provided, in most cases, corroborates information provided by

Iraq in its subsequent declarations. A few cases require continued investigation by the Commission to eliminate any possibility that they present potential loopholes in the ongoing monitoring and verification mechanism. The following cases exemplify such issues.

14. Supersonic parachute recovery system. In 1988, Iraq initiated the development of a supersonic parachute recovery system for the Al Hussein missile warhead. The programme continued through 1990. Iraq approached at least three different companies for the development, production and supply of the system. However, no systems were provided to Iraq. The Commission is currently investigating and verifying the programme's purpose and scope. Information available to the Commission from the potential suppliers does not corroborate Iraq's current declarations about the programme.

15. Unsymmetrical dimethyl hydrazine (UDMH). UDMH is a liquid fuel which can improve the performance of liquid-propellant rocket engines. In 1987, Iraq began inquiring about and procuring facilities, equipment, training and materials concerning every aspect of the use and production of UDMH and related systems in missiles. The programme continued until January 1991. Iraq declared that it had unilaterally destroyed 10.5 tons of UDMH in May 1991. The Commission has been unable to verify this. Further, Iraq declared that no experiments were performed using UDMH. The Commission has information which contradicts this statement. If Iraq mastered the technologies required for UDMH rocket engine design, the Commission would need to modify the ongoing monitoring and verification regime in the missile area to take account of Iraq's access to these technologies. The Commission is continuing to investigate this issue to ensure that it has an accurate account of Iraq's past activities in this regard.

Baseline data

16. The monitoring system in the missile area has been designed by assessing the critical aspects of each stage of the production of permitted missile systems to ensure that no components are produced or diverted for use in proscribed missile systems. Consequently, monitoring focuses on Iraq's non-proscribed missile research, development, testing and production activities, facilities and equipment. In addition, the system also monitors other facilities with related dual-purpose technologies and items and high-precision engineering manufacturing capabilities which could be used to support a clandestine effort to produce proscribed missiles.

17. The Commission completed the baseline survey of all of Iraq's declared missile and related research, development, test and production facilities in May 1994. Thirty-two baseline inspections were conducted during UNSCOM 71/BM 22. The baseline process included identifying the critical technologies and equipment, recommending the appropriate level of monitoring for the same and creating the detailed protocols necessary for conducting inspections at each site.

18. The Commission completed the installation of 41 monitoring cameras at 15 sites related to missiles or associated dual-use technology in July 1994. These cameras were tested during August 1994 and the system became operational in September 1994. The Commission completed the tagging and inventorying of 182

items of missile-related equipment in July 1994. The Commission completed a technical baseline survey of missile systems to be subject to monitoring in June 1994, and the tagging of all relevant operational missiles in Iraq in July 1994. The resident missile monitoring team initiated its inspection activities in August 1994.

Ongoing monitoring and verification apparatus

19. The plan for ongoing monitoring and verification of Iraq's compliance with relevant parts of section C of Security Council resolution 687 (1991), approved by the Security Council in its resolution 715 (1991), states that facilities, equipment, other items and technologies which could be used for the development, construction, modification or acquisition of ballistic missiles with a range greater than 150 kilometres should be subject to monitoring and verification. The Commission has undertaken to fulfil this requirement of the Security Council by designing a multi-level, comprehensive monitoring system covering Iraq's missile research, development, testing and production facilities as well as facilities with related dual-use capabilities. The monitoring system provides for: the periodic no-notice inspection of facilities by the Baghdad resident missile monitoring group; camera surveillance of critical areas and key production machines; inventory control, by tagging and regular inspection, of items and machinery located at key, related and dual-use facilities; special inspection teams to address specific issues (e.g., research and development activities); inspections to verify Iraq's compliance with existing resolutions; and aerial inspections and surveillance.

20. In order to accomplish the above tasks, the Commission has undertaken inspections of research, development, testing, production and modification activities and facilities. Inspection of research and development facilities establishes the technological capabilities of Iraq and helps identify any modifications necessary for the current monitoring regime. Inspection of testing facilities, including the witnessing of testing activity, provides assurance that current missile systems and those under development do not exceed the constraints established by the resolutions. Inspection of production and modification facilities guarantees that all missiles produced are accounted for and that no proscribed missile systems are produced. This is backed up by inspections of sites not currently under monitoring to ensure that no activities requiring monitoring are conducted at the site in question, thereby ensuring, through a programme of such inspections, the comprehensiveness of the monitoring system (i.e., that all that should be is monitored). Finally, the verification inspections of the operational missile ensures that no modification to extend the maximum range of these missile systems will go undetected.

21. The resident missile monitoring teams have conducted 178 inspections since the last report. These inspections have established the effectiveness of the monitoring regime in verifying the current status of Iraq's non-proscribed missile programmes and related technology. The resident team is entrusted with the inspection of Iraq's missile and related facilities to ensure that there is no research or development into or production of missile systems exceeding the specifications of the resolutions, that all declared equipment is accounted for and that records agree with information on research, development and production available from other sources. Further, regular collection and review of video

coverage of missile-related activities in critical areas and key equipment is conducted to guarantee that the Commission accounts for and tags all produced missiles subject to monitoring and that no production of proscribed missile systems occurs.

22. Since the last report the Commission has conducted three inspections of the tagged operational missiles to ensure that Iraq has not modified any missile to extend its range beyond that allowed by the resolutions. These inspections are conducted on a random sample of 10 per cent of the operational missile force three times per annum. No modifications of missiles under monitoring were detected.

23. The Commission has conducted, on a regular basis, research and development update inspections to confirm that current missile designs will not exceed the limits established by the resolutions. Such inspections are designed to review the technical details of the design, development and testing of missile systems and missile-related technological developments twice per annum. These inspections are designed to identify any requirement to modify the monitoring regime to assure its continued effectiveness. The Commission conducted its latest research and development update inspection in March 1995.

2. Chemical activities

Summary

24. During the high-level talks held at Baghdad in February 1995, Iraq promised to present a new full, final and complete declaration of its past chemical warfare activities in order to comply with the requirements of resolution 707 (1991). This it did on 25 March 1995, during the most recent visit of the Executive Chairman to Baghdad. The new information provided is now being verified, in particular the claim that significantly reduced quantities of chemical warfare agents were produced.

25. The chemical monitoring system in Iraq is now operational, with the installation of its monitoring equipment almost complete. The additions and modifications to the system which are in the course of being made are not such as to undermine the effectiveness of the overall regime. Together with an efficient export/import monitoring regime, this system is expected to preclude Iraq from resuming prohibited chemical activities.

Past programmes

26. In order to resolve outstanding issues relating to its past chemical weapons programmes, Iraq provided on 25 March 1995 a new "full, final and complete" declaration of all aspects of its past chemical weapons programmes. This declaration contains new information on: the history and organizational structure of the past programmes; the weaponization of chemical weapons agents; the procurement of chemical weapons-related materials; and the material balance for precursor chemicals and chemical weapons agents produced and weaponized. Iraq has agreed to provide additional information and clarifications concerning

these new declarations as required and upon the Commission's request. Any such additional information will be attached as an addendum to the new declaration.

27. In the new declaration, Iraq has revised some of the data previously provided. The most significant change relates to the quantities of chemical warfare agents produced. Iraq now declares that it produced 290 tons of chemical weapons agents less than previously stated. The declaration also indicated that, in 1985, certain biological activities were undertaken at Iraq's principal chemical weapons site, Muthanna. The Commission has started the process of verifying this new information. Verification of the statement relating to biological activities at Muthanna is dependent on full verification of Iraq's declarations concerning its biological activities in this time-frame.

28. On the basis of this new information, the Commission's understanding of Iraq's past chemical weapons programmes is as follows.

Agent production

29. Iraq started research into the production of chemical weapons agents in the 1970s and started batch production of agents in the early 1980s. At that stage, production was heavily reliant on the import of precursor chemicals from foreign suppliers.

30. In 1981, Iraq started producing the blister agent mustard (HD). Iraq's earlier declarations of 3,080 tons produced have been reduced in the latest disclosure to 2,850 tons. The quality of the mustard agent was good (not less than 80 per cent pure) and was such that the agent could be stored for long periods, either in bulk or in weaponized form. Even years after its production, the mustard agent analysed by the Commission was found to be in good and usable condition.

31. Production of the nerve gases tabun (GA) and sarin (GB) started in 1984 and the method of production changed over time in order to resolve stabilization problems. Iraq's latest declarations have reduced the stated amount of tabun produced from 250 tons to 210 tons and of sarin produced from 812 tons to 790 tons.

32. The tabun produced was poor, being of a maximum purity of 60 per cent. As a result, the agent did not store well and could only be stored for a limited period. Furthermore, Iraq experienced problems in the production of tabun owing to salt blockages forming in pipes during synthesis. Because of these problems, Iraq refocused its nerve agent research, development and production efforts on sarin (GB/GF).

33. The sarin produced was also of poor quality (maximum purity of 60 per cent when solvent is taken into account) and so too could only be stored for short periods. In order to overcome this problem, Iraq resorted to a binary approach to weaponization: the precursor chemicals for sarin (DF 2/ and the alcohols cyclohexanol and isopropanol) were stored separately for mixing in the munitions immediately prior to use to produce a mixture of two G-series nerve agents, GB and GF. Given that the locally manufactured DF had a purity of more than

95 per cent and the alcohols were imported and of 100 per cent purity, this process could be expected to yield relatively pure sarin.

34. Over the period from June 1992 to June 1994, the Commission's Chemical Destruction Group destroyed 30 tons of tabun, 70 tons of sarin and 600 tons of mustard agent, stored in bulk and in munitions.

35. Research into the production of CS was initiated at the Salman Pak site in the late 1970s and early 1980s for the purposes of riot control. It was conducted under the auspices of the Committee for National Security, not the Armed Forces. A few tons were produced at this site. In the early 1980s, military scale production of CS was started at the Muthanna site. The Commission has been unable to establish how much CS was produced in total. It is known that RPG-7 rocket-propelled grenades, 250- and 500-gauge bombs and 82mm and 120mm mortar shells were filled with CS, but again the quantity of munitions so filled cannot be established. Consequently, the Commission is unable to establish any kind of material balance for Iraq's CS-related activities.

36. Iraq also had a research and development programme for the production of a further nerve agent, VX. According to Iraq's account, VX was the focus of its research efforts in the period after September 1987. Iraq has stated that between late 1987 and early 1988, a total of 250 tons of phosphorous pentasulphide and 200 tons of di-isopropylamine were imported, these being two key precursors required for the production of VX. For the other precursors required, Iraq claims to have used only approximately 1 ton of methyl phosphonyl chloride (MPC) from a total of 660 tons produced indigenously. The remaining MPC is claimed to have been used to produce DF, then used in GB/GF production. The fourth precursor required for VX, ethylene oxide, was generally available, being a multi-purpose chemical.

37. Iraq states that it produced a total of only 10 tons of choline from the di-isopropylamine and ethylene oxide and approximately 3 tons of methyl thiophosphonyl dichloride from the phosphorous pentasulphide and methyl phosphonyl chloride. From this, Iraq states that it produced experimental quantities of VX (recently increased to 260 kg from 160 kg). Iraq has recently admitted that three 250-gauge aerial bombs had been filled with VX for experimental purposes.

38. Iraq claims that further attempts to produce VX were unsuccessful and the programme was finally abandoned in September 1988. According to Iraq's account, the remaining choline from the 10 tons was burned in early 1988 and the remaining 247 tons of phosphorous pentasulphide was discarded in 1991 by scattering it over an area of land and putting it in pits. Iraq also claims that 213 tons of di-isopropylamine was destroyed by bombing during the Gulf war. However, while the Commission has found traces of these chemicals at the sites at which Iraq states their destruction occurred, it has not been able to verify the quantities destroyed. Thus, precursors for the production of at least 200 to 250 tons of VX cannot be definitively accounted for.

39. The Commission has supervised the destruction, or verified Iraq's unilateral destruction, of 125 250-gauge bombs and several thousands 120mm

mortar shells. In its new declaration, Iraq declared an additional 350 500-gauge and 100 250-gauge aerial bombs filled with CS in 1987.

Precursor chemical production

40. In the early stages of its chemical weapons programme, Iraq imported all its precursor chemicals. Over time, however, Iraq sought to obtain the capability to produce indigenously all the precursors required for the production of the agents noted above. Iraq acknowledges that it had or was on the brink of having the capability to produce in quantity the precursors for tabun (GA): D4 and phosphorous oxychloride ($POCl_3$), the sarin/cyclosarin (GB/GF) precursors: methylphosphonyl difluoride (DF), methyl phosphonyl dichloride (MPC), dimethylmethyl phosphonate (DMMP), trimethylphosphite (TMP), hydrogen fluoride (HF), phosphorous trichloride (PCl_3) and thionyl chloride ($SOCl_2$). Phosphorous trichloride and thionylchoride are also the main precursors for the production of mustard (HD).

41. Iraq also had the capability to produce, at least at laboratory scale, sodium sulphide (Na_2S) and thiodiglycol (both for sulphur mustard agent production), methyl benzilate (for BZ production), triethanol amine (for nitrogen-mustard agent production) and potassium bifluoride and ammonium bifluoride (for GB/GF production). In addition, Iraq had the capability to produce the VX precursors choline, methyl thiophosphonyl dichloride (MPS) at the least at pilot-plant scale.

42. Clearly, any ongoing monitoring and verification system in the chemical area will need to address these capabilities.

Equipment

43. For its past chemical weapons programme, Iraq had equipment for research and for production purposes, both of which need to be covered by the monitoring system. Iraq claims that all the laboratory equipment used for research purposes was destroyed during the Gulf war. However, the Commission has been unable to verify this independently and hence cannot definitively account for all the equipment of concern.

44. Of the production equipment, the Commission tagged and inventoried 240 key pieces, of which 40 were subsequently destroyed under the Commission's supervision. This equipment includes reaction vessels, heat exchangers, distillation columns and corrosion-resistant fittings. It is estimated that a further 50 key pieces of equipment, known to have been imported by Iraq, were destroyed during the Gulf war.

45. Iraq has the capability to produce certain of this dual-purpose equipment indigenously, at welding and heavy engineering plants. However, Iraq is still reliant on imports of corrosion-resistant metal alloys to do so.

46. The chemical component of the ongoing monitoring and verification system has been designed to ensure monitoring of all the appropriate laboratory and

production equipment identified and the facilities where this equipment could be manufactured indigenously.

Munitions

47. Iraq has declared that it weaponized for chemical weapons purposes the following munitions: RPG-7 rocket-propelled grenades and 82mm and 120mm mortar shells exclusively for CS; 130mm and 155mm artillery shells for mustard agent; 250- and 500-gauge aerial bombs for mustard, tabun, sarin and CS; 122mm rockets, R-400 and DB-2 aerial bombs for sarin and mixtures of GB/GF; and Al Hussein missile warheads for sarin. Of these, Iraq acquired the capability to produce all of the aerial bomb types listed and the Al Hussein missile warheads and chemical containers for 122mm rockets. It was reliant on imports of the other empty munitions but had the capability to empty conventional artillery shells and aerial bombs for subsequent refill with chemical-weapons agent.

48. While the Commission can verify and confirm with Governments of suppliers the declared quantities of munitions imports, it cannot yet be sure that the declarations are comprehensive in this regard. However, the Commission's main efforts to establish a material balance for the chemical-weapons programmes as a whole rely more on material balances for agents and precursor chemicals than for munitions.

49. The major part of Iraq's chemical-weapons production and weaponization facilities has been destroyed. Identified chemical production equipment of dual-use character has been tagged. After the completion of the destruction of the relevant facilities, stockpiles and approximately 40 pieces of production equipment, the Commission's attention focused on Iraq's dual-purpose chemical capabilities in its non-proscribed industries.

Baseline data

50. The above indicates the technologies mastered by Iraq, chemicals, materials, items and equipment available to it and activities undertaken by it. The Commission clearly has to monitor these if it is to assure the Security Council that it is effectively monitoring Iraq's compliance not to reacquire chemical weapons. In addition, in order to ensure that it designed an effective and comprehensive monitoring system in the chemical area, the Commission had to conduct a survey of Iraq's non-proscribed chemical industries to assess the following: the level of research and development which could be applied to the production of chemical weapons agents and their precursors, either in laboratory or production quantities; the ability of Iraq to purify, stabilize and store either chemical weapons agents or their precursor chemicals; Iraq's capability to produce dual-use equipment which could be used to produce chemical weapons agents and precursors and its mastery of technologies, such as production of corrosion-resistant alloys and special welding technologies, required to manufacture such equipment; and Iraq's capability to develop, produce, fill or store munitions which could be used for chemical weapons purposes (e.g., white-phosphorous-filled 155mm shells, multi-purpose aerial bombs, etc.). Such capabilities are found in the organophosphorous and organohalide industries (such as pesticides, insecticides and fertilizers), the petrochemical industry, chemical laboratories, leather tanning, military munitions and heavy engineering

plants, and hence the Commission conducted baseline inspections of these industries in order to assess which sites and facilities required monitoring.

51. In 1994, the Commission completed baseline inspections of 57 chemical sites, and monitoring and verification protocols were prepared for those sites related to production and storage of chemicals of concern and for sites involved in the manufacture of chemical production equipment.

52. In January and February 1995, baseline inspections were conducted at 17 universities, colleges and research institutions to assess their potential and hence their relevance for monitoring. In addition, five military storage depots were visited because of their potential to store munitions for chemical weapons (empty or filled). Unless other dual-purpose facilities come to the attention of the Commission, this completed the process of preparing monitoring and verification protocols for the sites to be monitored. However, it is expected that the number of chemical sites to be monitored by the Commission will increase along with the development of Iraq's chemical industry.

53. With the exception of two facilities in Iraq related to pesticide formulation, none of the chemical sites currently monitored has the capability to produce banned items. In addition, the research laboratories inspected currently have no potential for conducting significant chemical weapons-related research and development.

Ongoing monitoring and verification apparatus

54. In addition to the monitoring capabilities shared across the disciplines, such as aerial surveillance, chemical monitoring is centred around visits by the monitoring group to sites to be monitored, tagging and inventorying of key materials and equipment, collection and analysis of air samples using automatic air samplers located at certain of these sites, and monitoring of key items of equipment by remote-controlled cameras. In the future, flow meters and seals may also be deployed at certain production facilities.

55. On 2 October 1994, the first chemical monitoring team (CG-1) started its monitoring activities from its base in the Baghdad Monitoring Centre. Currently, the third chemical monitoring group (CG-3) is in Iraq. The chemical monitoring groups have conducted 70 inspections to date. Beyond conducting ongoing monitoring and verification activities at sites for which monitoring and verification protocols have been prepared, the groups also visit chemical facilities which are currently not monitored, as part of a programme to ensure that such sites have not in fact acquired any capabilities which would require monitoring. If the group does identify a site at which monitoring should be conducted, it will establish procedures for regular monitoring of the site.

56. By the end of January 1995, all the sensor systems had been installed at the sites of interest. At six sites, 30 remote-controlled cameras were emplaced. At eight sites, 15 computer-controlled air samplers were installed. Sites so monitored include those capable of the production of precursors, dual-use equipment and pesticides.

57. At the end of February 1995, a chemical laboratory was installed at the Baghdad Monitoring Centre. The Centre now has the capability to analyse all types of chemical samples, including the samples from the air-sampling devices. The laboratory has a highly sensitive analytical capability using instruments and wet chemistry, providing sensitivity to parts per billion.

58. Minor adjustments are being made to the air-sampling devices to increase their reliability. These adjustments will be completed in May 1995. Meanwhile, manual-transportable air samplers will be made available to the chemical monitoring group. This will enable the group to take random air samples at sites during inspections. By the end of May 1995, the group will also be equipped with personal detection and protection equipment suitable for protection against all possible occupational and industrial hazards that might be enccuntered at Iraq's chemical facilities.

3. Biological activities

Summary

59. The task of establishing ongoing monitoring and verification in the biological area has taken longer than in other areas for two reasons: the nature and scope of the task made it a more difficult proposition; and Iraq's declarations about its dual-use capabilities were initially far from complete and the data contained in them varied from declaration to declaration to the point of contradiction. These difficulties notwithstanding, through the activities of its inspection teams, the Commission has been able to establish sufficient baseline data on key sites for it to commence monitoring. All the apparatus for biological monitoring is now in place and monitoring is proceeding.

60. However, Iraq has not provided an account of its past biological warfare programme and a new full, final and complete declaration recently received from Iraq does not redress the problem. It is unable to account definitively for all the materials and items that may have been used in such a programme and are known to have been acquired by Iraq. The Commission assesses that Iraq obtained or sought to obtain all the items and materials required to produce biological warfare agents in Iraq. With Iraq's failure to account for all these items and materials for legitimate purposes, the only conclusion that can be drawn is that there is a high risk that they had been purchased and in part used for proscribed purposes - the production of agents for biological weapons. In these circumstances, the Commission cannot conclude that its biological monitoring is comprehensive in coverage and properly focused, i.e., that it is monitoring all biological facilities, activities, materials and items that should be subject to monitoring.

Past programmes

61. Iraq maintains that it had no biological weapons-related activities, only a basic military biological research programme. This programme, declared to have been conducted solely at the Salman Pak site, is stated by Iraq to have been initiated in 1986 and discontinued in 1990. It is stated to have employed 10

persons and to have produced only 10 basic research papers on various aspects of three bacteria (B. anthracis, Cl. botulinum and Cl. perfringens). It is further claimed that no decision had been taken as to the longer-term direction of the programme until the programme's discontinuation in autumn 1990. In its declarations, Iraq fails to explain or account for various aspects of its procurement or construction activities in the biological area in this time-frame.

Complex growth media

62. Iraq acknowledges that it procured, through the Technical and Scientific Materials Import Division (TSMID), 3/ very large quantities of complex growth media 4/ in 1988 but has failed to provide an accounting for the purposes of this importation and for the use of a significant portion of it.

63. Iraq claims that, while the media was imported by TSMID, the import was on behalf of the Ministry of Health for the purposes of hospital diagnostic laboratories. This importation of media by types, quantities and packaging is grossly out of proportion to Iraq's stated requirements for hospital use. Iraq explains the excessive quantities imported and the inappropriate size of the packaging as being a one-of-a-kind mistake and attempts to justify the import as appropriate and required for medical diagnostic purposes.

64. However, for hospital diagnostic purposes, only small quantities are needed. According to Iraq's declarations, which are imprecise and changing, over the period 1987-1994 Iraq's total hospital consumption of all such media was less than 200 kg per annum. But in 1988 alone, TSMID imported nearly 39,000 kg of such media, which has a manufacturer's guarantee of 4 to 5 years. A further incongruity is that, of all the types of media required for hospital use, only a select few were "mistakenly" imported by TSMID in large quantities. These did not include those most frequently used in hospitals.

65. Furthermore, the packaging of TSMID imports is inconsistent with declared hospital usage: diagnostic assays use very small quantities of media and so, because the media deteriorates rapidly once a package has been opened, media for diagnostic purposes is normally distributed in 0.1-1 kg packages. However, the media imported by Iraq in 1988 was packaged in 25-100 kg drums. This style of packaging is consistent with the large-scale usage of media associated with the production of biological agents. The types of media imported are suitable for the production of anthrax and botulinum, known biological warfare agents researched by Iraq in its declared biological military programme.

66. The Special Commission has only accounted for some 22 tons of the 39 tons of complex media imported by TSMID in 1988. The media accounted for is still stored in Iraq (in large packages) and is under the Commission's monitoring regime. However, some 17 tons remain unaccounted for. Iraq claims that this quantity was distributed in original packages to numerous hospitals in 1989 but that it was all destroyed (along with documentation concerning its distribution, storage and consumption in hospitals) during riots that occurred in the aftermath of the Gulf war. It is claimed that no media was distributed to hospitals in regions where no riots occurred, e.g., in the Baghdad region. No attempts were made by Iraq to resupply the affected regions or hospitals to

compensate for losses, although large amounts of the same imported media in good condition were still available in Iraq.

67. Iraq initially presented a set of documents in an attempt to prove that media had been received by a Ministry of Health storage site and was partly distributed to certain regional health centres. Iraq subsequently admitted that these documents had in fact been "recreated" and now claims that all originals have been destroyed, misplaced or lost.

68. The Commission has information that, in addition to media delivered to Iraq in 1988, quantities of media were also purchased by Iraq in 1989 and 1990. Evidence of additional supplies in large packages was found in Iraq. This undermines Iraq's explanation that the TSMID purchases in 1988 were a one-of-a-kind mistake as to types and packaging of media imported, as does the fact that the Ministry of Health continued, through its own import division, its regular small-quantity purchases of media consistent with its diagnostic requirements throughout the period, including the purchase of kilogram quantities of two growth media only months after TSMID purchased 2½ tons of the same media.

69. Iraq's current accounting of media importation and disposal is not acceptable. Full and substantial accounting by Iraq for the media, eminently suitable for production of biological agents, is an essential task if the Commission is to have any confidence that there was no production of biological agent for weapons purposes and that Iraq's dual-use capabilities are sufficiently monitored to ensure that Iraq cannot clandestinely reacquire biological weapons.

Equipment

70. Iraq has not provided satisfactory explanations for some other significant procurement efforts by TSMID related to the acquisition of dual-purpose biological equipment and supplies critical to a biological warfare capability. The following illustrates some issues of concern.

71. When confronted by the Commission with evidence, Iraq acknowledged the purchase by TSMID in 1989 of four filling machines, ostensibly for a biopesticide project at the Salman Pak site. Until this acknowledgement, Iraq, while declaring Salman Pak to be the site of its biological military research programme, had not declared any biopesticide activity there. Filling machines, while having many uses, are required for filling bacterial warfare agent into munitions or containers. Full accounting for these machines is therefore a requirement. Iraq claims that these four machines were destroyed by bombing in the Gulf war. No evidence (e.g., scrap) has been provided to support this claim. Furthermore, before describing this loss of the filling machines, Iraq had previously declared that all equipment at Salman Pak had been dispersed prior to the commencement of the air war in order to protect it from bombing and that no equipment had been destroyed at Salman Pak.

72. TSMID procured a spray dryer in 1989. Again, it is claimed that this was for the above-mentioned biopesticide project at Salman Pak. This spray dryer has technical specifications which provide a capability of drying the bacterial slurry resulting from the fermentation process to produce dry matter with

particle sizes in the range of 1 to 10 μ. This particle size is associated with efficient dispersion of biological warfare agents, not with the production of biopesticides. Furthermore, dry bacterial matter is easier to store for longer periods. Such spray dryers, therefore, would be a crucial component in acquiring an indigenous capability to produce viable and durable biological weapons.

73. TSMID attempted to order various named and virulent anthrax strains, known to be particularly appropriate for biological warfare purposes. Iraq flatly denies this, despite confirmation to the Commission by the potential supplier.

Construction of biological facilities

74. As noted above, in addition to Iraq's procurement activities, its construction activities for biological purposes are also a matter of concern. In particular, the production facility at the Al Hakam site has long raised concerns relating to its original intent, as opposed to its current use. Iraq claims that this facility is and always was intended only as a single-cell protein (SCP) plant for the production of animal feed. However, certain design features of the Al Hakam facility were superfluous to the requirements of an SCP plant, and more consistent with the requirements of a biological warfare agent facility. Some examples follow.

75. The original design for Al Hakam had many costly features associated with work with toxic or infectious materials. Production of SCP does not involve the use of such materials and so would not require such safety features. An example of these features was the sophisticated air filtration system, using HEPA filters, 5/ for both input and output air on the declared animal house. Iraq argues that this system was required to prevent the spread of animal diseases. If, as claimed, the building were to house only animals for feeding, there would be no requirement for such safety features. On the other hand, such an air filtration system would be desirable if the building were planned for animal experiments involving infectious agents. According to information available to the Commission from the potential supplier, Iraq also ordered a similar air filtration system for another building at Al Hakam, housing laboratories. Iraq denies that such an order was made. When asked to present an air ventilation design plan for the building, Iraq stated that that particular page of the plans for the Al Hakam facility had been lost.

76. The layout of Al Hakam and the security arrangements there were more consistent with a military facility or a facility to produce toxic or pathogenic material than with a commercial SCP plant. The facility was constructed and equipped under conditions of great secrecy, akin to those used in Iraq's other proscribed programmes. No documents are available which identified Al Hakam, at the time of construction, as a purely civilian production project. Iraq could not provide any public announcements that were made about what it has since claimed was intended to be one of the world's largest SCP plants. No foreign contractors or suppliers ever visited the site. Iraq falsified the information on an end-user certificate for a fermenter purchased for Al Hakam, claiming that it would be installed at another site and under the management and supervision of another organization. It similarly falsified information for the import of spare parts for equipment available at Al Hakam.

Baseline data

77. While monitoring activities, by definition, concentrate on current dual-purpose biological capabilities and require comprehensive and verified baseline data on these capabilities, designing efficient and effective monitoring also necessitates a full understanding of Iraq's past biological programme. For example, knowledge of Iraq's past procurement methods for currently proscribed items or information on Iraq's past programme priorities provides important indicators in identifying choke points (either in terms of physical assets or in terms of technologies) in Iraq's ability to reacquire banned capabilities and hence for identifying where monitoring efforts can most profitably be focused.

78. In preparation for monitoring Iraq's biological activities, the Commission evaluated those dual-purpose technologies, activities, materials, items and equipment which could contribute to a biological warfare capability and proceeded to identify those sites or facilities in Iraq which, through the possession of same, contribute to such a capability. The basis for the above was Iraq's declarations of its dual-purpose capabilities, in turn verified by the Commission, and information obtained by the Commission in the course of its inspections of sites and facilities in Iraq.

79. The previous report submitted pursuant to Security Council resolution 715 (1991) (S/1994/1138) detailed the problems encountered by the Commission in establishing complete and accurate baseline data for Iraq's dual-purpose biological capabilities: incomplete and inaccurate initial declarations submitted by Iraq, inconsistencies in the data contained in Iraq's various declarations and between them and the findings of inspection teams, and undeclared movement of items to be monitored between inspections so that inconsistencies arose between the findings of inspection teams. All this made it impossible for the Commission to establish firm baseline data from which to start its monitoring of Iraq's biological activities.

80. The difficulties in obtaining reliable, accurate and complete declarations on biological sites necessitated a more radical and intensive approach to obtaining the baseline information required. The already intense schedule of biological inspections was further intensified with the initiation in December 1994 of a coordinated series of intrusive inspections. Interim biological monitoring began on 1 December 1994, comprising a Baghdad-based monitoring team that, in concert with special ad hoc teams of experts, sought to establish the baseline data necessary for the commencement of monitoring. Biological audits were conducted at 10 priority sites for which the information supplied by Iraq and obtained by earlier inspection teams was the most disparate.

81. The aim of these inspections was: to obtain information not yet provided but required for monitoring purposes; to assess Iraq's ability to produce indigenously key dual-purpose biological equipment; to examine records at organizations involved in the import and maintenance of such equipment; to prepare a full inventory of dual-use equipment in Iraq; and, through technical talks and interviews, to obtain a complete understanding of Iraq's past military biological programme. For sites of particular concern for the monitoring regime, the teams sought to obtain an in-depth understanding of the current

activities and plans with regard to personnel, chain of command, reporting structure, operations and production, research and development activities, and production capability.

82. By pursuing interim monitoring as a means of obtaining the baseline data required for monitoring, the Commission was relying less on Iraq's openness and more on inspection findings than originally intended. This approach required a greater outlay of resources and so could only be applied to a few sites. The interim monitoring process did not obviate the need for Iraq to report accurately all its biological activities which required declaration under the plan for ongoing monitoring and verification.

Ongoing monitoring and verification apparatus

83. Given the nature of biological weapons, effective monitoring in the biological area necessitates a broader monitoring effort than is required in the other areas. The Commission will monitor Iraq's basic biological research potential, its stocks of micro-organisms and complex growth media, its biological production capacity (i.e., fermenters and incubators), its ability to isolate micro-organisms from fermenter slurry (i.e., spray and drum dryers) and to create particles of a size appropriate for biological warfare (milling machines), its ability to fill containers with biological materials and its ability to disperse such material.

84. These capabilities can be found in the following types of institutions in Iraq (hence monitoring efforts will take the Commission's teams to such facilities): biological laboratories (found in hospitals, universities and the food industry), biological production facilities (e.g., single-cell protein production, vaccine production, drug formulation and production, breweries and distilleries), and agricultural crop sprayers. In all, monitoring of Iraq's biological activities covers some 80 sites.

85. Monitoring is based on maintaining a comprehensive and accurate inventory of dual-purpose items and activities in Iraq, primarily through on-site inspections, i.e., by updating the baseline data contained in the monitoring and verification protocols. This involves the identification of any sites not yet subject to ongoing monitoring and verification which acquire dual-purpose capabilities requiring monitoring, the identification of newly acquired dual-use equipment, the inventorying and tagging of such equipment and assessment of its intended use and the assessment of how such newly acquired capabilities increase Iraq's overall biological warfare capabilities. Monitoring modalities include: on-site inspections (with or without prior notice); aerial surveillance; interviews with key personnel at monitored sites; examination of site records; updating of inventories; continuous flow monitoring and sensor-activated camera monitoring; sample taking; notifications of transfers within Iraq of inventoried items; and notification of modification, import or other acquisition of dual-purpose biological research and production equipment of dual-use character.

86. Monitoring efforts have resulted in the installation of 24 cameras at 5 key sites and locations (16 of them at 3 locations at the Al Hakam site) and the initiation of monitoring at those sites for which monitoring and verification protocols were ready. A total of 13 biological inspections were undertaken in

the period from October 1994 to March 1995. The interim monitoring groups conducted 51 visits to 20 sites. A biological room has been installed at the Baghdad Monitoring Centre for the processing, packaging and onward transmission of biological samples taken during the course of monitoring.

87. Monitoring and verification protocols have now been completed for all the key biological sites in Iraq identified to date and monitoring of them is now proceeding. However, the failure of Iraq to disclose fully all aspects of its past biological military research programme means that the Commission cannot be certain that its monitoring programme in the biological area is covering all the sites, facilities and capabilities that require monitoring under the terms of the plan approved by the Security Council.

4. Nuclear activities

88. The Commission, in accordance with paragraph 9 (b) (iii) of resolution 687 (1991), and paragraph 4 (b) of resolution 715 (1991), provides assistance and cooperation to the IAEA 687 Action Team set up to implement provisions of those resolutions pertaining to nuclear weapons. This includes the designation of undeclared sites to be inspected. The Commission provides expertise for logistical, information and other operational support for the Action Team's conduct of ongoing monitoring and verification. Monitoring activities in Iraq are coordinated across disciplines, including the nuclear area, not only to ensure the most effective and efficient use of resources, but also to benefit from the synergies ensuing from a multidisciplinary approach to the monitoring of sites of interest to more than one discipline.

89. During the period under review, the Commission has: provided comments on Iraqi requests to relocate nuclear-related, dual-use materials and equipment within Iraq; participated in inspections and monitoring teams of the International Atomic Energy Agency (IAEA); provided fixed-wing (C-160) and rotating wing (CH-53g) aircraft for the transport of IAEA inspectors into Iraq from Bahrain, and between points within Iraq; and provided the IAEA 687 Action Team with logistic support for its inspection activities through the Baghdad Monitoring Centre.

90. Iraqi requests to relocate materials, items and machine tools of potential nuclear application are approved only after two technical evaluations are concluded. The first evaluation, provided by IAEA, checks significance to past nuclear programmes, or potential value to a renewed nuclear programme. The Commission, in turn, looks for significance to all weapon programmes, including ballistic missiles and chemical and biological weapons. It provides its decision on request as required under paragraph 3 (c) of Security Council resolution 707 (1991). Close coordination between IAEA and the Commission is particularly important in the management and control of machine tool movements within Iraq. For example, flow-forming machines are under the monitoring of both the Commission and IAEA.

91. During the period since the last report, the Commission's nuclear experts have participated in several IAEA monitoring and inspection teams. Such joint

operations have resulted in an increase in operating efficiency and improved decision-making on such issues as site designation and equipment movement.

92. In addition to routine transport of IAEA inspectors from Bahrain to Habbaniyah by C-160 fixed-wing aircraft, helicopter support has proved invaluable in facilitating long-haul monitoring campaigns by IAEA environmental-sampling experts. Water sampling sites range from as far north as Zakho close to the Turkish border, to a western site on the Euphrates just west of Al Qa'im, to far south at several sites near Al Basrah. Without helicopter support, an effective widespread water sampling programme would be rendered difficult. In addition to supporting the surface-water sampling programme, the Commission has recently approved fitting its helicopters with air samplers. The helicopter-borne air samplers will complement IAEA's ability to investigate nuclear contaminant transport throughout the surface-water system and thus provide a more fully integrated and effective environmental sampling programme.

5. Aerial surveillance

93. The Commission's aerial inspection assets, the high-altitude surveillance aircraft (U2) and the Baghdad-based Aerial Inspection Team, continue to play an important role in the monitoring regime.

94. Both of the above assets continue to conduct aerial surveillance of sites under monitoring in Iraq, at the direction of the Commission, on a regular basis. With the advent of the permanent monitoring teams in Iraq, experts from the teams now accompany the team in order to assist it in focusing on particular areas of relevance at sites. The results obtained from these aerial missions is an important part of the overall inspection process in Iraq.

95. Both aerial assets will also continue to undertake missions at new sites in Iraq to ensure that the monitoring regime continues to encompass all activities and facilities within Iraq of relevance to the monitoring regime.

96. To date some 243 missions have been undertaken by the U2 and 550 missions by the Aerial Inspection Team.

B. Export/import mechanism

Summary

97. The proposal for the export/import mechanism prepared by the Commission and IAEA is now before the Sanctions Committee for appropriate action to co-sponsor the proposal so that it may be submitted to the Security Council for approval. The revised annexes to the Commission's and the IAEA's plans for ongoing monitoring and verification, which list the items to be notified under the mechanism, have been circulated to the Council and made available to the Sanctions Committee.

98. Planning continues for the setting up by the Commission and IAEA of a Joint Unit to process notifications received under the mechanism, and for taking all

other actions necessary to put the mechanism into effect when the Council so decides.

1. Actions to establish the mechanism

99. Under paragraph 7 of resolution 715 (1991) the Security Council requested the Commission, in cooperation with the Committee established under resolution 661 (1990) (the Sanctions Committee) and the Director General of IAEA "to develop ... a mechanism for monitoring any future sales or supplies by other countries to Iraq of items relevant to the implementation of section C of resolution 687 and other relevant resolutions, including the present resolution and the plans approved hereunder".

100. The Commission and IAEA therefore undertook to prepare a proposal outlining a mechanism which, in their view, would fulfil these requirements. The mechanism envisaged rested on a system of notifications, made by Iraq and the Governments of exporters, concerning the supply of dual-purpose items to Iraq, dual-purpose in this context being those items referred to in the relevant annexes to the plans of the Commission and IAEA for ongoing monitoring and verification approved by the Council in resolution 715 (1991). 6/ The mechanism also envisaged the provision of information by Governments on any attempts by Iraq to procure items prohibited to it under the Council resolutions.

101. In February 1994, a seminar of invited export control experts was convened at the Commission's offices in New York, in order to explain the principles of the mechanism envisaged and to obtain views on how it might be implemented in practice. The seminar was attended by representatives of IAEA and experts from those Governments which had wide experience of exporting goods to Iraq, prior to the imposition of sanctions, which would now need to be notified under the mechanism. On 28 and 29 May 1994, the Executive Chairman of the Commission met senior representatives of the Government of Iraq, in order to explain the principles of the mechanism, and an agreed summary of that meeting was signed by both sides.

102. On 13 May 1994, the Executive Chairman wrote to the Sanctions Committee Chairman, transmitting the proposal for consideration and approval by the Committee. The Executive Chairman noted that paragraph 7 of resolution 715 (1991) was intended to make provision for the monitoring of sales or supplies by other countries to Iraq of relevant dual-purpose items after the general sanctions imposed by resolution 661 (1990) on those items had been lifted, pursuant to paragraph 21 of resolution 687 (1991). In order to avoid confusion between the sanctions regime and the monitoring mechanism, the Executive Chairman proposed that the two regimes should be kept entirely separate. The role of the Sanctions Committee would have priority for as long as items covered by the plans for ongoing monitoring and verification remained subject to the general sanctions under resolution 661 (1990). Once the sanctions under resolution 661 (1990) on any dual-purpose items or categories of items were lifted or whenever the Committee allowed Iraq to input such items under an exemption from the general sanctions, those items would become subject to the proposed export/import mechanism.

103. Informal discussions in the Sanctions Committee appeared to reveal that a consensus could be arrived at on the mechanism contained in the proposal. However, before going to the Security Council with the required tripartite proposal for the export/import mechanism, the members of the Committee preferred to see a more detailed list of items to be notified than already appeared in the relevant annexes to the Commission's plan for ongoing monitoring and verification. Such a list would provide greater specification, in technical terms, of what constituted a dual-purpose item and hence the export of which to Iraq would be subject to notification. A general requirement to revise the annexes had already become apparent during the course of inspections in Iraq and the establishment of the ongoing monitoring and verification regime. Iraq had also requested that provisions of the annexes to the Commission's plan be specified in greater detail.

104. The Commission's plan, as approved by the Security Council in its resolution 715 (1991), lays down in its paragraph 26 the following procedure for revising the annexes: "The Special Commission, may, however after informing the Security Council, update and revise the annexes in the light of information and experience gained in the course of implementation of resolutions 687 (1991) and 707 (1991) and of the plan. The Special Commission shall inform Iraq of any such changes."

105. In October 1994, the Commission convened a further informal seminar of international experts to review the proposed changes to the annexes. While these lists were in large measure accepted, proposals were made for further changes. In January 1995, a third seminar was held to review the draft of the final versions of the lists, to consider the draft notification forms to be completed by Governments pursuant to the mechanism, and to discuss the practical implementation of the mechanism.

106. The final version of the revised annexes to the Commission's Plan were submitted to the Security Council on 17 March 1995 (S/1995/208) and to the IAEA's plan on 23 March 1995 (S/1995/215).

107. The joint proposal by the Commission and IAEA was resubmitted to the Sanctions Committee on 15 February 1995. The mechanism, upon receiving the concurrence of the Sanctions Committee, will be transmitted to the Council for approval. It is anticipated that this will be done in the very near future.

2. Actions to implement the mechanism

108. The mechanism envisages the creation of a Joint Unit, staffed by personnel from the Commission and IAEA. The Joint Unit will be represented by staff in New York and in the Monitoring Centre in Baghdad.

109. Measures to establish these offices and the practical procedures to implement the mechanism began some 18 months ago with the recruitment of expert personnel to the Commission to focus primarily on the export/import mechanism, in the context of the overall ongoing monitoring and verification regime. These experts are also preparing the documentation which will explain, in detail, the workings of the mechanism in respect of the notification requirements levied on

Iraq and the exporting Governments. These documents will be transmitted to Governments in a circular note. A customized computer database is also being developed at the Commission's office in New York, in order to ensure the swift processing of notification data and to support analytical requirements.

110. The Joint Units in New York and Baghdad will be staffed by customs experts and data-entry clerks. They will be responsible for receiving and processing, in manual and computerized format, the notifications provided by Iraq and exporting Governments. The notifications will also be analysed by experts of the Commission and IAEA and appropriate actions taken on the basis of their recommendations.

111. In Iraq, Joint Unit personnel, in conjunction with the resident monitoring team experts, will be responsible for inspecting notified items and associated paperwork, on their arrival in Iraq. They will also undertake no-notice inspections at points of entry into Iraq and other sites, in order to verify that all notifiable items are being declared.

112. As further preparation for the implementation of the export/import mechanism, the Commission has undertaken studies to ascertain the likely volume of data which the mechanism will generate. The results of these internal studies, and others undertaken by outside bodies, indicate that the number of shipments of dual-use goods could be expected not to exceed 2,000 during a normal year. Plans to acquire personnel and equipment to support this volume of shipments are being put into effect.

113. The Commission has also begun a dialogue with Iraq, in order to gain a full understanding of the existing customs and import systems in place in the country and so better to plan operations associated with the mechanism. In addition, the Commission will also shortly conduct baseline inspections of points of entry into Iraq as further preparation with the aim of foreshortening the time required to have a fully operational mechanism after its adoption and the easing or lifting of sanctions.

C. National implementation measures

114. Paragraphs 20 and 21 of the Commission's monitoring plan require Iraq to adopt the measures necessary to implement its obligations under section C of resolution 687 (1991), resolution 707 (1991) and the plan itself, to include a prohibition and penal legislation forbidding all natural and legal persons under Iraq's jurisdiction from undertaking anywhere any activity prohibited for Iraq by resolution 687 (1991) and all other related resolutions.

115. Iraq has consulted the Commission on the draft of a decision by the Revolution Command Council intended to give effect to those requirements. The Commission made certain suggestions to the Iraqi authorities concerning the need for such legislation to follow closely the language of the Council's resolutions. Attention was also drawn to the need for such legislation promptly to incorporate any changes to the lists of controlled items contained in the annexes to the plans for ongoing monitoring and verification and to the need to provide assurances to those who might cooperate with the Commission and IAEA in

the performance of their tasks that such cooperation per se would not be the subject of any legal or other punitive measures.

116. It is the Commission's understanding that a revised draft now stands before the Revolution Command Council for adoption and, during the most recent high-level discussions in Baghdad in March 1995, the Iraqi authorities gave assurances that such adoption could be anticipated early in April 1995. The Commission has also been provided with a copy of regulations which the National Monitoring Directorate will issue to give full effect to the Revolution Command Council's decision. These regulations have now been translated from Arabic into English at United Nations Headquarters. They are available to any interested delegations in the Office of the Executive Chairman.

D. Organization

1. Executive Office, New York

117. In order to respond to changing priorities and tasks, the organization and equipping of the Executive Office of the Special Commission in New York has undergone substantial changes since Iraq accepted Security Council resolution 715 (1991) in November 1993. The increase in the number of staff to cope with the increased workload has resulted in acute overcrowding of the office space available to the Commission. If this issue is not resolved, it is bound to affect adversely the work performance of the staff.

118. Under the terms of the plan approved under resolution 715 (1991), Iraq is required to produce a substantial volume and range of declarations on a regular basis. Thus the immediate requirement for the Commission was to increase the number of staff in New York, in order to handle the additional data. However, in addition to further experts specialized in proscribed weapons systems, there was also a necessity to recruit from supporting Governments individuals with knowledge of relevant civil industries in which dual-use items and equipment might be used and others to assist the experts in the processing, handling and storage of the data.

119. Assistance was also required to collate much of the material required for the creation of the site protocols and to update those protocols in the light of declarations from Iraq and reports from the inspection teams conducting baseline inspections in Iraq. At the conclusion of the baseline process it also became apparent that such assistance would continue to be central to the successful maintenance of the monitoring system as the Commission established a multi-layered system with the introduction of sensors, primarily cameras and air-sampling equipment, at sites under monitoring in Iraq. The product from these sensors is an integral part of the monitoring regime and, as such, must be collated and analysed in the context of overall knowledge of the functions of sites under monitoring.

120. As noted in section B above, describing preparations for the export-import mechanism, the Commission began preparations for establishing the mechanism some 18 months ago with the recruitment of staff specialized in customs procedures. In 1994, in the light of the highly specialized requirements of administering

such a mechanism, further staff were recruited. In the event of a modification to the existing sanctions regime, additional staff will be recruited to administer the export/import mechanism and to oversee the conduct of operations in Iraq. Analysis of the notifications provided by Iraq and Governments of exporters under the mechanism will be undertaken by the existing expert staff.

121. To support the above change of emphasis in mission focus, the Commission has made major upgrades to its automated data-processing equipment. This has involved an upgrade to the Commission's local area network (LAN) system and individual workstations. Many of these upgrades have been undertaken by donations of equipment by supporting Governments. The Commission has also been able to take advantage of existing computerized systems developed in other forums in support of other arms-control efforts.

122. To support the export/import mechanism, a dedicated, customized database is being created, modelled on the export control computer database used by a supporting Government. One prime concern in respect of handling the notifications received under the mechanism will be to ensure the security of such data, recognizing its commercial sensitivity. The computer equipment required to sustain the export/import database will also be donated by supporting Governments.

2. Baghdad Monitoring and Verification Centre

123. Preparations for the establishment of the Baghdad Monitoring and Verification Centre, its staffing and early operations, are described in annex II to the Commission's report of 7 October 1994 (S/1994/1138), which briefly describes the current operational status of the Centre.

124. The Commission plans to complete its initial projects for the Centre facilities during this summer. A principal delaying factor has been the lack of funding to purchase materials and supplies for renovation and construction. Several contributing Governments have made direct donations of materials, equipment and supplies so that seconded craftsmen and technicians could accomplish their work. The remaining projects are not essential for effective ongoing monitoring and verification but will, once completed, contribute to the improved efficiency of the Centre.

125. The Centre currently provides: space for an operations room, supporting radio and telephone (voice and facsimile) communications and real-time monitoring of sites through 107 remote-controlled cameras; offices for the aerial inspection team, and the biological, chemical, missile and nuclear monitoring groups (the latter group is staffed by IAEA); aerial photography, biological and chemical laboratories; a medical clinic; and offices for the Director and his support staff. The Centre staff also includes a German army detachment with three CH-53G helicopters at Al-Rasheed air base, deployed to support the operations of inspection teams and monitoring groups throughout Iraq. Approximately 80 staff are assigned to the Centre.

126. The next development within the Centre will be preparations to support an export/import mechanism at the appropriate time. The Centre includes adequate

space for this purpose, and specific facility modifications for the group are anticipated to be minimal.

127. The operation of the Centre is supported by the United Nations Administrative Unit-Baghdad which, inter alia, provides maintenance for the Commission's vehicles. Air transportation to support the Centre continues to be provided from Bahrain by a German air-force detachment with two C-160 Transall aircraft. This function, and all arrangements for the movement of experts and technicians as well as for cargoes of supplies, materials and equipment, is managed by the Commission's field office in Bahrain.

IV. FUTURE OPERATIONS

A. Financial status of the Special Commission

128. In order to plan for future monitoring and verification activities, including those related to export/import, the Commission needs secure long-term funding, rather than the ad hoc funding of the present situation. Lack of secure long-term funding has complicated the Commission's task of implementing its mandate and planning future operations.

129. Funds have only been identified for the first half of 1995 and are being received piecemeal. At present, there is no indication that additional funds will be made available to the Commission to cover operations for the remainder of 1995. An additional $13 million is required to support the Commission's operations until the end of 1995.

130. If further funds are not identified in the near future, the incremental shut-down of the Commission's operations, as indicated in the Commission's letter to the President of the Security Council of 3 November 1994, will ensue.

Status of finance of the Special Commission as at 31 March 1995

	United States dollars
Total funds provided through loans/contributions	9 405 500
Designation of 778 funds	82 190 000
Total available for operations	91 595 500
Expenditures from inception to 31 December 1993	55 230 704
1994 expenditures (estimated)	24 390 000
1995 projected requirements	25 000 000
Estimated total requirements from inception to 31 December 1995	104 620 704
Surplus/(deficit) against available funds	(13 025 204)

B. Operations and organization

131. As indicated in chapter III above, the main focus of the Commission's activities in Iraq is currently the operation of the system of ongoing monitoring and verification. Funding permitting, the Commission expects this to continue to be the case. Further effort will continue to be devoted to clarifying and resolving the remaining outstanding issues in relation to the past programmes and, once the export/import mechanism has been adopted, also as indicated above, a greater share of resources will be devoted to the operation of the mechanism.

132. It is envisaged that, until the implementation of the export/import mechanism, ongoing monitoring and verification activities will comprise primarily the following types of activities:

(a) Inspection to verify the completeness of the list of sites monitored and of the inventories, to verify declarations as to the activities conducted at sites or to pursue any information obtained that might question Iraq's compliance with its obligations under paragraph 10 of resolution 687 (1991);

(b) Aerial surveillance, from both the Commission's high-altitude surveillance aircraft (the U-2) and its helicopters;

(c) Maintenance of the site monitoring and verification protocols by the monitoring experts at the Baghdad Monitoring Centre;

(d) Monitoring activities conducted by experts dispatched to Iraq for a specific purpose because either the expertise required for the activity is not available amongst the staff of the Centre or because the scope of the activity is too great for the staff of the Centre to undertake without additional assistance;

(e) Review and analysis of the product of the sensors installed at the various sites.

V. CONCLUSIONS

133. The elements of ongoing monitoring and verification are now in place and the system is operational. Over time, additional elements may be added or existing elements may be adapted in the light of experience in order better to focus monitoring efforts, to respond to developments in Iraq's industrial base and to increase the level of assurance it provides that Iraq is not reacquiring banned capabilities. The Commission wishes to place on record that it has received full cooperation from Iraq in the setting up and operation of the monitoring system. Some issues, however, still remain.

134. There must be confidence that the system is comprehensive in its coverage of all that needs to be monitored. Accounting by Iraq for the materials, items and equipment acquired for past programmes and the use to which they have been put is thus required. An understanding of the levels of technologies attained by Iraq in its past programmes is also required if the Commission's efforts are

to be correctly focused. If this accounting and understanding is not credibly provided by Iraq, the Commission will not be able to state with confidence that its monitoring is comprehensive and correctly focused, as is now illustrated by the situation in the biological area.

135. As described elsewhere in the present report, the Commission has continued its investigation in all areas of the past proscribed weapons activities in Iraq and its verification of Iraq's declarations. The Commission has come to the conclusion that Iraq has not provided a full and comprehensive disclosure of its past military biological programme or accounted for items and materials acquired for that programme. With Iraq's failure to account for the use of these items and materials for legitimate purposes, the only conclusion that can be drawn is that there is a high risk that they had been purchased and used for a proscribed purpose - acquisition of biological warfare agent. The Commission will continue its intensive efforts to elucidate all such outstanding issues arising from this and the other past programmes. It notes that, if Iraq decided to provide full, accurate and verifiable information, such matters could be resolved expeditiously.

136. An essential element of the system of ongoing monitoring and verification will be the export/import mechanism. The Commission and IAEA have completed work on all the components of the mechanism and it is now for the Sanctions Committee and the Security Council to consider and take action on the proposal for the mechanism prepared by the Commission and IAEA. The monitoring system, under Security Council resolution 715 (1991), will not be complete until the Council has acted on this matter.

Notes

1/ I.e., those which have permitted uses but which could be used for the acquisition of banned weapons.

2/ Methyl phosphonyl difluoride.

3/ The Technical and Scientific Materials Import Division, the purchasing arm of the Technical Research Centre that was, within the Military Industrialization Corporation, directly responsible for Iraq's military biological programme.

4/ Complex growth media constitute the substrate on or in which bacteria or viruses are grown. Types imported by Iraq can be used in hospitals or laboratories as a diagnostic tool or for large-scale production of bacteria and viruses, be it for biological weapons purposes or civilian use, e.g., vaccine production.

5/ These filters are of the sort used to create clean environments or to ensure that contaminants are not released from a workplace into the surrounding environment. They are therefore associated with work requiring high containment, such as work on pathogens or toxins.

6/ S/22871/Rev.1 and S/22872/Rev.1 and Corr.1, amended by S/1995/208 and S/1995/215, respectively.

APPENDIX

Inspection schedule

(in-country dates)

Nuclear

15 May-21 May 1991	IAEA1/UNSCOM 1
22 June-3 July 1991	IAEA2/UNSCOM 4
7 July-18 July 1991	IAEA3/UNSCOM 5
27 July-10 August 1991	IAEA4/UNSCOM 6
14 September-20 September 1991	IAEA5/UNSCOM 14
21 September-30 September 1991	IAEA6/UNSCOM 16
11 October-22 October 1991	IAEA7/UNSCOM 19
11 November-18 November 1991	IAEA8/UNSCOM 22
11 January-14 January 1992	IAEA9/UNSCOM 25
5 February-13 February 1992	IAEA10/UNSCOM 27
7 April-15 April 1992	IAEA11/UNSCOM 33
26 May-4 June 1992	IAEA12/UNSCOM 37
14 July-21 July 1992	IAEA13/UNSCOM 41
31 August-7 September 1992	IAEA14/UNSCOM 43
8 November-19 November 1992	IAEA15/UNSCOM 46
6 December-14 December 1992	IAEA16/UNSCOM 47
22 January-27 January 1993	IAEA17/UNSCOM 49
3 March-11 March 1993	IAEA18/UNSCOM 52
30 April-7 May 1993	IAEA19/UNSCOM 56
25 June-30 June 1993	IAEA20/UNSCOM 58
23 July-28 July 1993	IAEA21/UNSCOM 61
1 November-9 November 1993	IAEA22/UNSCOM 64
4 February-11 February 1994	IAEA23/UNSCOM 68
11 April-22 April 1994	IAEA24/UNSCOM 73
21 June-1 July 1994	IAEA25/UNSCOM 83
22 August-2 September 1994	IAEA26/UNSCOM 90
7 September-29 September 1994	NMG 94-01
14 October-21 October 1994	IAEA27/UNSCOM 93
29 September-21 October 1994	NMG 94-02

21 October-9 November 1994	NMG 94-03
8 November-29 November 1994	NMG 94-04
29 November-16 December 1994	NMG 94-05
16 December 1994-13 January 1995	NMG 94-06
12 January-2 February 1995	NMG 95-01
2 February-28 February 1995	NMG 95-02
28 February-16 March 1995	NMG 95-03
16 March-6 April 1995	NMG 95-04
6 April-26 April 1995	NMG 95-05

Chemical

9 June-15 June 1991	CW1/UNSCOM 2
15 August-22 August 1991	CW2/UNSCOM 9
31 August-8 September 1991	CW3/UNSCOM 11
31 August-5 September 1991	CW4/UNSCOM 12
6 October-9 November 1991	CW5/UNSCOM 17
22 October-2 November 1991	CW6/UNSCOM 20
18 November-1 December 1991	CBW1/UNSCOM 21
27 January-5 February 1992	CW7/UNSCOM 26
21 February-24 March 1992	CD1/UNSCOM 29
5 April-13 April 1992	CD2/UNSCOM 32
15 April-29 April 1992	CW8/UNSCOM 35
18 June 92-14 June 94	CDG/UNSCOM 38
26 June-10 July 1992	CBW2/UNSCOM 39
21 September-29 September 1992	CW9/UNSCOM 44
6 December-14 December 1992	CBW3/UNSCOM 47
6 April-18 April 1993	CW10/UNSCOM 55
27 June-30 June 1993	CW11/UNSCOM 59
19 November-22 November 1993	CW12/UNSCOM 65
1 February-14 February 1994	CW13/UNSCOM 67
20 March-26 March 1994	CW14/UNSCOM 70
18 April-22 April 1994	CW15/UNSCOM 74
25 May-5 June 1994	CW16/UNSCOM 75
31 May-12 June 1994	CW17/UNSCOM 76
8 June-14 June 1994	CW18/UNSCOM 77
10 August-23 August 1994	CW19/UNSCOM 89

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13 September-24 September 1994	CW20/UNSCOM 91
2 October 1994-14 January 1995	CG 1
23 October-27 October 1994	CW21/UNSCOM 95
11 January-21 January 1995	CW23/UNSCOM108
16 January-22 January 1995	CW22/UNSCOM107
14 January-15 April 1995	CG 2
16 April-4 July 1995	CG 3

Biological

2 August-8 August 1991	BW1/UNSCOM 7
20 September-3 October 1991	BW2/UNSCOM 15
11 March-18 March 1993	BW3/UNSCOM 53
8 April-26 April 1994	BW4/UNSCOM 72
28 May-7 June 1994	BW5/UNSCOM 78
24 June-5 July 1994	BW6/UNSCOM 84
5 June-8 June 1994	BW7/UNSCOM 86
25 July-7 September 1994	BW8/UNSCOM 87
20 August-25 August 1994	BW9/UNSCOM 88
29 August-3 September 1994	BW10/UNSCOM 92
29 September-14 October 1994	BW11/UNSCOM 94
23 September-26 September 1994	BW12/UNSCOM 96
15 November-22 November 1994	BW15/UNSCOM104
2 December-10 December 1994	BW16/UNSCOM105 (IMT)
2 December-13 December 1994	BW13/UNSCOM 99 (IMT)
9 December-18 December 1994	BW17/UNSCOM106 (IMT)
28 December 1994-31 January 1995	IBG 1
10 January-22 January 1995	BW18/UNSCOM109
20 January-6 February 1995	BW19/UNSCOM110
23 January-3 February 1995	BW22/UNSCOM113
3 February-17 February 1995	BW20/UNSCOM111
3 February-17 February 1995	BW21/UNSCOM112
12 March-18 March 1995	BW23/UNSCOM115
24 March-6 April 1995	BW24/UNSCOM116
1 February-3 April 1995	IBG 2
4 April-9 July 1995	BG 1

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Ballistic missiles

30 June-7 July 1991	BM1/UNSCOM 3
18 July-20 July 1991	BM2/UNSCOM 10
8 August-15 August 1991	BM3/UNSCOM 8
6 September-13 September 1991	BM4/UNSCOM 13
1 October-9 October 1991	BM5/UNSCOM 18
1 December-9 December 1991	BM6/UNSCOM 23
9 December-17 December 1991	BM7/UNSCOM 24
21 February-29 February 1992	BM8/UNSCOM 28
21 March-29 March 1992	BM9/UNSCOM 31
13 April-21 April 1992	BM10/UNSCOM 34
14 May-22 May 1992	BM11/UNSCOM 36
11 July-29 July 1992	BM12/UNSCOM 40A+B
7 August-18 August 1992	BM13/UNSCOM 42
16 October-30 October 1992	BM14/UNSCOM 45
25 January-23 March 1993	IMT1a/UNSCOM 48
12 February-21 February 1993	BM15/UNSCOM 50
22 February-23 February 1993	BM16/UNSCOM 51
27 March-17 May 1993	IMT1b/UNSCOM 54
5 June-28 June 1993	IMT1c/UNSCOM 57
10 July-11 July 1993	BM17/UNSCOM 60
24 August-15 September 1993	BM18/UNSCOM 62
28 September-1 November 1993	BM19/UNSCOM 63
21 January-29 January 1994	BM20/UNSCOM 66
17 February-25 February 1994	BM21/UNSCOM 69
30 March-20 May 1994	BM22/UNSCOM 71
20 May-8 June 1994	BM23/UNSCOM 79
10 June-24 June 1994	BM24/UNSCOM 80
14 June-22 June 1994	BM25/UNSCOM 81
3 July-28 July 1994	BM26/UNSCOM 82
15 July-24 July 1994	BM27/UNSCOM 85
17 August-9 October 1994	MG 1
2 October-6 October 1994	BM28/UNSCOM 98A
23 October-28 October 1994	BM28/UNSCOM 98B
14 October 1994-21 February 1995	MG 2

19 October-22 October 1994	MG 2A
2 December-6 December 1994	MG 2B
9 December-14 December 1994	BM29/UNSCOM101
9 December-16 December 1994	BM30/UNSCOM102
27 January-31 January 1995	MG 2C
22 February- ... 1995	MG 3
6 March-14 March 1995	UNSCOM103/BM31
Computer search	
12 February 1992	UNSCOM 30
Special missions	
30 June-3 July 1991	
11 August-14 August 1991	
4 October-6 October 1991	
11 November-15 November 1991	
27 January-30 January 1992	
21 February-24 February 1992	
17 July-19 July 1992	
28 July-29 July 1992	
6 September-12 September 1992	
4 November-9 November 1992	
4 November-8 November 1992	
12 March-18 March 1993	
14 March-20 March 1993	
19 April-24 April 1993	
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3 October-6 October 1994
4 November-20 November 1994
7 November-12 November 1994
14 November-17 November 1994
4 December-18 December 1994
14 December-20 December 1994
7 January-31 January 1995
7 January-21 January 1995
13 January-26 January 1995
13 January-16 March 1995
12 January-28 January 1995
23 January-14 February 1995
25 January-4 February 1995
19 February-23 February 1995
22 February-28 February 1995
28 February-18 March 1995
16 March-29 March 1995
24 March-27 March 1995